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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,765	02/16/2005	Gunnar Plesch	13195-00009	8010

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EXAMINER	
LIU, SUE XU	

ART UNIT	PAPER NUMBER
1639	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/524,765	PLESCH ET AL.	
	Examiner	Art Unit	
	SUE LIU	1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 19-30* is/are pending in the application.

4a) Of the above claim(s) *9-17 and 19-30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☒ Claim(s) *1 and 5* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/10/2005* .
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Status

1. Claim 18 has been canceled as filed on 8/18/06.

Claims 1-17 and 19-30 are currently pending.

Claims 9-17 and 19-30 as well as all non-elected SEQ ID NOs have been withdrawn.

Claims 1-8 with SEQ ID NO:1 are being examined in this application.

Election/Restrictions

2. Applicant's election without traverse of Group 1 (claims 1-8) with SEQ ID NO:1, in the reply filed on 9/12/08 is acknowledged.

3. Claims 9-17 and 19-30 as well as the non-elected SEQ ID NOs are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/12/08.

Priority

4. This application is filed under 35 U.S.C 371 of PCT/EP03/08393 (filed on 07/30/2003).

5. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 8/16/2002. It is noted, however, that applicant has not filed a certified copy of the Germany (102 38 434.7) application as required by 35 U.S.C. 119(b).

Information Disclosure Statement

6. The IDS filed on 11/10/2005 has been considered. See the attached PTO 1449 form.

Specification

7. The disclosure is objected to because of the following informalities: The section of the "Brief description of the several views of the drawing" is missing from the instant specification. See MPEP 608.01.

Appropriate correction is required.

8. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. MPEP 608.01.

Claim Objections

9. Claim **5** is objected to because of the following informalities: It is not clear if applicants are intending to delete the term "A" (in front of "The method as claimed…") and "as claimed in one of claims 1 to 4" in line 1 of the instant claim 5. Appropriate correction is required.

10. Claim **1** is objected to for reciting non-elected invention (i.e. the non-elected SEQ ID NOs, genes, and/or nucleic acid sequences).

Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Written Description Rejection

12. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The instant claims recite a "A method for *identifying herbicidally active substances* comprising selecting a substance which reduces or blocks the expression or the activity of the gene product of a nucleic acid or a gene…" wherein the nucleic acid or gene comprises "**a** nucleic acid sequence with the sequence shown in SEQ ID NO:1…"

To satisfy the written description requirement, applicants may convey reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention.

Applicants may show possession of an invention by disclosure of drawings or structural chemical formulas that are sufficiently detailed to show that applicant was in possession of the claimed invention as a whole. See, e.g., Vas-Cath, 935 F.2d at 1565, 19 USPQ2d at 1118.

The written description requirement of 35 U.SC. 112 exists independently of enablement requirement, and the requirement applies whether or not the case involves questions of priority. The requirement applies to all inventions and includes chemical inventions. The fact that the patent is directed to method entailing use of compounds, rather than to compounds per se, does not remove patentee's obligation to provide a description of the compound sufficient to distinguish infringing methods from non-infringing methods. See Univ. of Rochester v. G.D. Searle & Co., 358 F.3d 916, 920-23, 69 USPQ 2d 1886, 1890-93 (Fed. Cir. 2004).

With regard to the description requirement, applicants' attention is invited to consider the decision of the Court of Appeals for the Federal Circuit, which holds that a "written

description of an invention involving a chemical genus, like a description of a chemical species, 'requires a precise definition, such as by structure, formula [or] chemical name,' of the claimed subject matter sufficient to distinguish it form other materials." University of California v. Eli Lilly and Co., 43 USPQ2d 1398, 1405 (1997), quoting Fiers v. Revel, 25 USPQ2d 1601, 1606 (Fed. Cir. 1993) (bracketed material in original) [The claims at issue in University of California v. Eli Lilly defined the invention by function of the claimed DNA (encoding insulin)].

The written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species or by actual reduction to practice, reduction to drawings, or by disclosure of relevant, identifying characteristics, i.e., structure or other physical an/or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the claimed genus. See Eli Lilly, 119 F. 3d at 1568, 43 USPQ2d at 1406.

Claim 1 is drawn to a genus of methods using a genus of nucleic acid sequences. The instant claim 1 recites various nucleic acid sequences such as the followings:

A.) "a nucleic acid sequence" of SEQ ID NO:1, which can broadly interpreted to be any fragment of SEQ ID NO:1;

B.) "a nucleic acid sequence which can be derived from the amino acid sequences show in SEQ ID NO:2… owing to the degeneracy of the genetic code", which can be any nucleic acid sequence (or fragment thereof) encoding for SEQ ID NO:2;

C.) "a nucleic acid sequence… a derivative or a fragment of the nucleic acid";

D.) "a nucleic acid sequence which encodes a derivatives or fragments of the polypeptides…" which can be any nucleic acid sequence encoding for any "derivative" or "fragment" of the polypeptide;

E.) "a nucleic acid sequence which encodes a fragment or an epitope of a polypeptide which binds specifically to an antibody" which can be any antibody, any epitope, etc.;

Neither the instant specification nor the claims have demonstrated common structure and/or function for the claimed genus of nucleic acid sequences/genes (or derivatives or

fragments thereof), polypeptides (derivatives or fragments thereof), antibodies, etc. In addition, no representative numbers of species for each claimed genus is provided to show possession of the claimed genus of nucleic acid sequences.

To provide evidence of possession of a claimed genus, the specification must provide sufficient distinguishing identifying characteristics of the genus. The factors to be considered include disclosure of complete or partial structure, physical and/or chemical properties, functional characteristics, structure/function correlation, methods of making the claimed product, or any combination thereof. (see MPEP 2163 II).

In this case, the instant application did not provide support to show possess of the entire claimed genus of nucleic acids with various functions. The instant specification does not provide representative species and/or a core structure of all the "derivatives" or fragments of a nucleic acid sequences that would lead to the identification of a herbicidal compound. The instant specification also does not provide representative species and/or a core structure for the entire genus of "polypeptides" or derivatives / fragments thereof that can lead to the identification of a herbicidal compound. The instant specification also does not provide representative species and/or a core structure for the entire genus of "antibodies" or antibody epitopes that can lead to the identification of a herbicidal compound. The instant specification does not establish a core structure with the functional language of "identifying herbicidally active substance."

"A definition by function alone "does not suffice" to sufficiently describe a coding sequence "because it is only an indication of what the gene does, rather than what it is." Eli Lilly, 119 F.3 at 1568, 43 USPQ2d at 1406. See also Fiers, 984 F.2d at 1169-71, 25 USPQ2d at 1605-06 (discussing Amgen Inc. v. Chugai Pharmaceutical Co., 927 F.2d 1200, 18 USPQ2d 1016 (Fed. Cir. 1991))."

(MPEP 2163; emphasis added).

In addition, the court has provided the following in regard to possession of DNA:

"An adequate written description of a DNA, such as the cDNA of the recombinant plasmids and microorganisms of the '525 patent, "requires a precise definition, such as by structure, formula, chemical name, or physical properties," not a mere wish or plan for obtaining the claimed chemical invention. Fiers v. Revel , 984 F.2d 1164, 1171, 25 USPQ2d 1601, 1606 (Fed.Cir. 1993). Accordingly, "an adequate written description of a DNA requires more than a mere statement that it is part of the invention and reference to a potential method for isolating it; what is required is a description of the DNA itself." Id. at 1170, 25 USPQ2d at 1606."

"Thus, as we have previously held, a cDNA is not defined or described by the mere name "cDNA," even if accompanied by the name of the protein that it encodes, but requires a kind of specificity usually achieved by means of the recitation of the sequence of nucleotides that make up the cDNA. See Fiers , 984 F.2d at 1171, 25 USPQ2d at 1606." (See *Eli Lilly, 119 F. 3d at 1568, 43 USPQ2d at 1406.)*

The instant claimed invention also does not provide support for the entire genus of antibodies.

"Noelle v. Lederman, 355 F.3d 1343, 1349, 69 USPQ2d 1508, 1514 (Fed. Cir. 2004) (holding there is a lack of written descriptive support for an antibody defined by its binding affinity to an antigen that itself was not adequately described)."

(see MPEP 2163 II).

In this case, the entire genus of "antigens" (e.g. fragments, derivatives of the either the nucleic acid sequence (SEQ ID NO:1) or of the polypeptides) is not adequately described as discussed above.

Therefore, applicants are not in possession of the entire genus of nucleic acid sequences (e.g. derivatives or fragments of SEQ ID NO:1) that can be used to identify herbicides.

Applicant's claimed scope represents only an invitation to experiment regarding possible nucleic acid sequences that might be used for the purpose of screening for herbicides.

Second paragraph of 35 U.S.C. 112

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A.) The instant claim 1, in general, is confusing and unclear. The said claim 1 appears to recite Markush groups or alternative groups of different nucleic acid sequences. However, the instant claim 1 is not written in a proper Markush format and renders the said claim unclear and indefinite. Applicants are respectfully directed to MPEP 803.02 and/or 2173.05(h) for proper alternative claim languages. The instant claim 1 seems to use the conjunction "or" to indicate alternative groups (after part gg)). However, it is not clear the last part (i.e. "wherein the gene product comprises an amino acid sequence…") after the conjunction, "or", is another alternative embodiment.

In addition, the said phrase of "wherein the gene product" in the last line of the instant claim 1 is also not clear. It is not clear if the said phrase is modifying all previous parts (i.e. aa)-gg)) or if itself is another alternative part of the said claim 1.

Further, the instant claim 1 also recites "and/or" after part ff) of the said claim, which also renders the claim unclear and confusing. The instant claim recites "the gene product of **a** nucleic acid or **a** gene" in the first method step, however, the "and/or" phrase seems to imply a combination of genes, which seemly conflicting recitations render the instant claim indefinite.

Thus, one of ordinary skill in the art would not be able to define the metes and bounds of the instant claimed invention.

B.) Claims 2 and 3 recite the limitation "the activity of the nucleic acid" in line 1. There is insufficient antecedent basis for this limitation in the claim. The claim 1 (from which claims 2 and 3 depend) only recite "the activity of the gene product of a nucleic acid" not "the activity of the nucleic acid".

C.) Claim 3 recites the limitation "the activity of the nucleic acid" in line 1. There is insufficient antecedent basis for this limitation in the claim. The instant claim 1 only recites "the activity of the gene product", which can be either protein or mRNA.

D.) Claim 4 recites the limitation "the identification of the substance" in line 2. There is insufficient antecedent basis for this limitation in the claim. The instant claim 1 only recites "identifying" in the preamble of the said claim, and does not recite a positive method step of "identification of the substance".

E.) Claim 5 recites the limitation "the selected substances" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. The instant claim 1 recites "selecting a substance" in singular form. It is not clear to which plurality of "substance**s**" the said term is referring.

F.) The instant claim 8 recites "wherein the method is carried out in an organism which is a conditional or natural mutant of one of the sequences described in claim 1" which is unclear and confusing. The instant claim 8 seems to recite the "organism" is "the sequences" described in claim 1. It is not clear how "sequences" can be "an organism".

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(Note: the instant claim numbers are in bold font.)

Levin

16. Claims 1, 2 and 5-8 are rejected under **35 U.S.C. 102(b)** as being anticipated by **Levin** et al. (US 6,387,637; 5/14/2002; cited in IDS).

The instant claims recite a "A method for *identifying herbicidally active substances* comprising selecting a substance which reduces or blocks the expression or the activity of the

gene product of a nucleic acid or a gene…" wherein the nucleic acid or gene comprises "**a** nucleic acid sequence with the sequence shown in SEQ ID NO:1…"

The italic portion in the preamble of the instant claim 1 is construed as "intended uses" of the instant claimed invention.

Levin et al, throughout the patent, teach methods of identifying substances that can inhibit activity of various genes (e.g. Abstract; cols. 3-4). The reference also teaches various genes isolated from "*Arabidopsis*" (e.g. col.2). The reference teaches "a screening assay to identify inhibitors that are potential herbicides" (e.g. Abstract) with method step of selecting "an inhibitor" (or compound) of the activities of various nucleic acids (or genes) (e.g. col.7, lines 40+), which reads on the method step of **clm 1**. The reference also teaches the nucleic acids can have sequences or fragments of SEQ ID NO:1 (e.g. col.7, lines 40+), which SEQ ID NO:1 comprises "**a** nucleic acid sequence with the sequence shown in SEQ ID NO:1" (see attached Sequence Alignment Result # 1 from SCORE) of **clm 1** because the said claim language (i.e. "a nucleic acid sequence… of SEQ ID NO:1") reads on any fragment of the instant claimed SEQ ID NO:1.

The reference teaches comparing the plant growth between plants with normal expression for a gene and plants with overexpression of the same gene (i.e. transgenic plants), and observing the chemical inhibition of plant growth (e.g. col.24+). The reference also teaches selecting compounds inhibiting growth in non-transgenic plant but not in the transgenic plants (overexpressing the gene). Thus, the reason of the chemical inhibition is due to the inhibition of the gene expression or activity in the non-transgenic plant as these inhibitors are the "inhibitors"

of the gene products (e.g. cols.24-25). The reference also defines the term "expression" as refers to the transcription and/or translation of an endogenous gene or a transgene in plants (e.g. col.10, lines 37+). Thus, the reference inherently teaches inhibition (blocking or reducing) the transcription/translation of the plant genes as recite in **clm 2**.

The reference also teaches applying the "inhibitors" or compounds to plants to test the herbicidal activity (e.g. col.7; col.24, lines 60+), which reads on the method step of **clm 5**.

The reference also teaches the screening steps on carried out in plants (e.g. col.24, lines 40+), which the plants read on the organisms of **clms 6** and **7**.

The reference teaches using transgenic plants (mutant of wildtype plants) (e.g. col.24+), which reads on the mutant organism of **clm 8** as the instant claim 8 can be best interpreted (see the rejection over the instant claim 8 under 35 USC 112, 2nd para).

The reference also teaches "Novel herbicides can now be discovered using high-throughput screens that implement recombinant DNA technology" (e.g. col.1, lines 39+).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Levin and Others

18. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Levin** et al. (US 6,387,637; 5/14/2002; cited in IDS), in view of **Siehl** et al (US 5,780,254; 7/14/1998; cited in IDS) and **Berg** et al (The 1999 Brighton Conference –Weeds; 11/15/1999; page 491-500; cited in IDS).

Levin et al, throughout the patent, teach methods of identifying substances that can inhibit activity of various genes as discussed supra. The reference also teaches "Novel herbicides can now be discovered using high-throughput screens that implement recombinant DNA technology" (e.g. col.1, lines 39+).

Levin et al do not explicitly teach the activity of the gene is "reduced or blocked by a low-molecular-weight substance" as recited in **clm 3**. The reference also does not explicitly teach "the identificiation of the substances is carried out in a high-throughput screening" as recited in **clm 4**.

However, **Berg** et al., throughout the publication, teach high throughput screening of herbicides using genetic information (e.g. Abstract). The reference also teaches the needs and advantages using high throughput screening methods to select for a herbicidal substance (e.g. p.491+). The reference teaches diverse products (or compounds) can be generated according various agricultural needs (e.g. p.491). The reference also teaches various chemical libraries such as the ones with up to 1 million compounds can be screening for various gene targets (e.g. p.496).

Siehl et al., throughout the patent, teach identifying compounds that specifically inhibit a plant gene target and thus identifying a herbicide (e.g. Abstract). The reference teaches using

library of various compounds such as the ones listed in the Tables (e.g. col.12+), which compounds read on the "low-molecular weight substance" (of **clm 3**) as the term is broadly used in the instant specification.

Therefore, it would have been prima facie obvious for one of ordinary skill in the art at the time the invention was made to screen for a herbicide using low molecular weight compounds in a high throughput screening assay.

A person of ordinary skill in the art would have been motivated at the time of the invention to use a high throughput screening assay for screening for a herbicide, because both Levin and Berg teach high throughput screen for new herbicides is known and routine in the art, and the Berg reference also teaches the advantages and needs for the high throughput screening so that diverse compounds can be efficiently screened. Thus, it would have been obvious to one of ordinary skill in the art to apply the standard technique high throughput screening as taught by both Levin and Berg, to improve the screening assay for the predicable result of enabling standard compound library screening for the identification of a potential herbicide.

A person of ordinary skill in the art would have been motivated at the time of the invention to use compounds of low molecular weight to screen for a herbicide, because Siehl et al teach the needs for using appropriate compounds to inhibit the identified gene target so that inhibition of plant growth can be achieved. Thus, depending on the experimental design, compound libraries of low molecular weight can be used for the screening process. In addition, because the cited references teach methods of screening/identifying inhibitors of genes using various compound libraries, it would have been obvious to one skilled in the art to substitute one

type of compound for the other to achieve the predictable result of screening the desired compound library.

A person of ordinary skill in the art would have reasonable expectation of success of achieving such modifications since all the cited references have demonstrated the success of screening various libraries (or compounds) to identify potential herbicides.

Double Patenting

19. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

'962

20. Claims 1, 2, 4 and 6-8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 and 5-7 of copending

Application No. 10/467,962 (PGPUB 20050246784; hereinafter referred to as the '962 application) in view of **Levin** et al. (US 6,387,637; 5/14/2002; cited in IDS).

The '962 application claims "A method of identifying a herbicidally active substance comprising inhibiting… at least one of…" (Claim 1).

The '962 application also claims reducing or blocking transcription, process, etc. (Claim 2).

The '962 application also claims high throughput screening (e.g. Claim 3), using various organisms (claim 6), and mutants (e.g. claim 7).

The '962 application does not explicitly claim using a nucleic acid with a sequence recited in SEQ ID NO:1.

However, **Levin** et al, throughout the patent, teach methods of identifying substances that can inhibit activity of various genes (e.g. Abstract; cols. 3-4). The reference also teaches various genes isolated from "*Arabidopsis*" (e.g. col.2). The reference teaches "a screening assay to identify inhibitors that are potential herbicides" (e.g. Abstract) with method step of selecting "an inhibitor" (or compound) of the activities of various nucleic acids (or genes) (e.g. col.7, lines 40+), which reads on the method step of **clm 1**. The reference also teaches the nucleic acids can have sequences or fragments of SEQ ID NO:1 (e.g. col.7, lines 40+), which SEQ ID NO:1 comprises "**a** nucleic acid sequence with the sequence shown in SEQ ID NO:1".

A person of ordinary skill in the art would have been motivated at the time of the invention to use the nucleic acid of the Levin reference, because it offers the advantages of a desired herbicidal target gene. In addition, because the cited reference application ('962) and the Levin reference teach methods of screening/identifying inhibitors of genes using various target

genes, it would have been obvious to one skilled in the art to substitute one gene for the other to achieve the predictable result of screening for a herbicide.

This is a provisional obviousness-type double patenting rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Liu whose telephone number is 571-272-5539. The examiner can normally be reached on M-F 9am-3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached at 571-272-0951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sue Liu/
Patent Examiner, AU 1639
11/14/08